

**LOWER COOK INLET FINFISH STAFF MEETING,
18-20 FEBRUARY 1998, ANCHORAGE**

by

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INTRODUCTION

This report attempted to capture the general theme and major details of discussion during the annual staff meeting for Lower Cook Inlet (LCI) commercial salmon and herring fisheries. In some cases, discussion notes were restructured or pooled to improve continuity and cohesiveness of the overall documentation. Meeting action items (Table 1) and a list of attendees (Table 2) are attached. The attendees list indicates all individuals who participated in this meeting; although some individuals were present for only a portion of the meeting. A variety of handouts, as distributed in draft form at the staff meeting, are also attached. Many of these handouts were subsequently modified prior to formal release to the public. Requests for more information on a topic should be directed to the appropriate biologist. Stephen Fried, Charlie Trowbridge, and Linda Brannian reviewed this report and provided comments to clarify this report.

ADMINISTRATION

Review of 1997 Meeting Action Items

Staff evaluated the action item list from the 1997 staff meeting (Otis 1997). Most assignments were completed, although staff had the following comments:

- a. Sport Fish will tag a portion of the cohos destined for Homer Spit in 1998;
- b. McNeill's August memo indicated Kondzela had analyzed half of the Delight/Desire tissues;
- c. the catch-and-escapement sampling program was not extensively modified last year due to personnel and budget constraints; and
- d. Baker did not come to Homer to evaluate the conversion of the LCI salmon database from Rbase to MS Access.

Pre-audit Review

Brannian requested staff use the pre-audit expenditures issued by Jan Gamble to avoid inconsistencies. The submitted pre-audits seemed generally acceptable. Some discrepancies in code 383 were identified as typos, and code 381 was projected to be over budget in Line 100. Thus, some 381 herring survey work needs to be budgeted to 383. Brannian will distribute the FY99 yellowbook requests. Line 100 expenses need to balance within-region as does Line 200-500. At the area level, Line 100 can't be moved into Lines 200-500, but Lines 200-500 can be moved into Line 100 with adequate justification. Note that FY99 requests did not include merit increases for seasonals.

Miscellaneous Office Issues

Vehicles

Bucher identified two concerns about leasing vehicles from the Department of Transportation (DOT): (1) determining actual DOT leasing costs; and (2) DOT costs versus commercially leasing a vehicle. Brannian will try to examine and better understand the DOT charging process. Szarzi found it was cheaper to use DOT than commercially lease for a year-round vehicle. Note that some area managers have rented vehicles for only the sampling season. Given that Homer finfish staff have two vehicles, staff discussed turning in one vehicle during the winter months and also putting a shell on the retained pickup.

Credit Cards

In the Homer office state credit cards have only been issued to Marnee Beverage and Mike Parish. Hepler recalled the name imprinted on the credit card may be held responsible for interest on late payments because the state won't pay interest payments; Beverage will be assigned to research this concern.

Office Space Requirements and Remodeling.

Szarzi will add 1-2 new seasonals in the summer of 1998 and possibly 1-2 more in 1999; Meyer will add 1 seasonal in July 1998. Bucher recently met with the building owner, Sam Beachy, to discuss building renovations. If Beachy modifies the building, he would like to see the lease extended without soliciting additional bids; four 1-year renewals remain on the existing contract. To accommodate staff needs, Beachy is reviewing building codes regarding replacing the center cubicles with real offices. Bucher displayed the office floorplan and described the 3-phase remodel. As part of phase 1, Beachy has ordered windows for the existing library where Bechtol and Otis will move. Beachy suggested making the library/conference room into offices since it already has windows and southern exposure, and moving the library/conference room into the center area. Homer staff will continue to discuss phase-2 and -3 options, including renovation funding.

Staffing

Bucher mentioned Balland, working for Sport Fish, remains in a Commercial Fish PCN; Hilsinger felt this was not a problem. Bechtol distributed a proposal written by Phil Cowan, Homer Safety Officer, to extend Cowan's time by 2 weeks to adequately cover his safety officer responsibilities. Brannian suggested Bechtol and Bucher could accommodate the position within regular budgets and a request to increase the pre-audit accordingly.

Office Billing Allocations

Beverage (Homer clerical support) had previously expressed concerns that office charges for copy machine expenses, etc. are adjusted as staff are added from the respective divisions. She will be encouraged to monitor and suggest changes to charge allocations as staffing levels change.

SALMON

Management

1998 Season Outlook

Bucher discussed the 1998 LCI salmon forecast and distributed a table of harvest projections.

Seldovia Subsistence

Hammarstrom summarized the Board's Seldovia Subsistence decision which lengthened the opening another 10 days and expanded closed waters around the harbor mouth. Due to the short timeframe, this regulation may be difficult to codify prior to the fishery and Hilsinger volunteered to write the EO if needed. Brannian will contact Rob Bosworth to have the subsistence regulation change listed as a priority for Dept. of Law review. Further regulation change requires daily reporting, and Hammarstrom is going to issue a subsistence handout and will also contact a Seldovia village member, such as Lillian Elvsaa, to assist with accurate daily reporting of subsistence catch and effort.

Sockeye

Bucher was optimistic about projected 1998 sockeye returns, although Grouse Lake remains questionable. Few wild stock harvests are expected because tender support, when available, is primarily limited to enhanced runs in the Southern District. Cook Inlet Aquaculture Association (CIAA) cost-recovery is anticipated at China Poot and Hazel, but uncertainties exist over recovery efforts at Kirschner due to this system's distance from port and a reliance on volunteer harvesting.

Pink

Tutka will be the major pink producer and is forecast for a large return. However, Tutka had a good run last year and large runs on sequential years are unusual. It is not yet known how much of the Tutka run will be reserved for CIAA cost recovery. Bucher mentioned the potential implications on

Outer District pink production from large abundances of Prince William Sound (PWS) hatchery pinks. The PWS fish emerge earlier than LCI fish to feed on the available forage base, potentially impacting survival of natural fry production from the Outer and Eastern Districts, "downstream" in the Gulf current.

Other Species

No major effort is anticipated for chum runs as area returns are generally small in abundance. Any coho effort has typically occurred in Kamishak late in the summer. Staff suggested listing the chinook harvest forecasts only as a long-term average and to not mention natural versus enhanced fish; Bucher and Hammarstrom will modify forecast wording.

Development

PNP Project Review

Simpson distributed a summary of 1997 Private/Nonprofit (PNP) hatchery eggtakes and releases. Most of LCI production facilities were close to their projected eggtakes, except Port Graham Hatchery (PGH) which was well below their pink egg projection. In 1997 PGH partially spawned some coho by extracting some eggs and then releasing the partially-spawned fish back into freshwater. Staff expressed numerous concerns about this practice. The PGH facility, except for the coho module, burned down this winter. The PGH permit allows for fall releases into freshwater. PGH has requested permit modifications to allow spring releases directly into saltwater, although survival is questionable. Given a poor wild return in 1997 that would result in limited freshwater competition, ADF&G staff favored making spring coho releases into freshwater, although it was unclear how Genetics staff would view this option.

CIAA requested approval to release Grouse Lake stock into Spring Creek because of the poor production from Grouse Lake. Freshwater survival of Grouse Lake releases is unknown because no monitoring occurs beyond counts of pre-smolt released into the freshwater system. The City of Seward would like to expand the marine industrial facility by Spring Creek, and potential conflicts are likely between cost-recovery and recreational harvests. This issue will be discussed further at the Regional Planning Team meeting, in which Bucher serves as team chair. Hilsinger will contact Gary Fandrei regarding allocative decisions through the Board process and the proposed Spring Creek PAR.

Seward Sea Life Center submitted a 1998 application after a reported take of 1 pollock, 1 seastar, and 1 shrimp, after the previous permit expired. Simpson continued to solicit comments on the 1998 permit application. In addition, staff interested in a tour of the Seward Sea Life Center should contact Simpson, perhaps in May.

Limnology Issues

A teleconference call was placed to Edmundson and Carlson, Limnology staff in Soldotna. The Limnology Lab was reorganized to be within Region II with a corresponding budget reduction and a loss of 2 positions. Continuing work will include lake sampling, smolt and juvenile salmon production evaluation, with a focus on Region 2 and outside funding needed for non-region work. It remains unclear how sampling costs will be allayed on Region 2. Hilsinger explained that all seasonal staff are funded by soft money with only Edmundson's position and \$20 k in office expenses on general funds. Carlson's funding is a 50:50 split between Upper Cook Inlet and limnology. CIAA still provides ~\$20 k for sample processing, although this is expected to be scaled back over time. Dickson's limnology work includes an EVOS project and some lake fertilization and water sample collection; Limnology pays for sample processing with grant funding from CIAA. The Delight/Desire project has \$11 k for close-out funding this year with no additional EVOS proposals anticipated for FY98. Because this summer's Delight weir provides an opportunity to collect limnology samples, Bucher questioned if funds were available for sample processing. Limnology staff felt they could archive samples if funding is not available for immediate processing. Brannian suggested that a proposal for processing of limnology samples, possibly to include adult/smolt counting, from Delight and, perhaps, Desire be sent to National Parks for potential funding and given Parks' interest in this project. Per-sample processing costs total \$325: \$250 for water chemistry and \$75 for zooplankton. Edmundson will contact CIAA regarding funding the limnology sampling of lakes in Kamishak Bay.

Leisure Lake Fertilization

Bucher sent a letter to Fandrei (CIAA) formalizing that CIAA will fund the fertilizer purchase and transport costs for the fertilizer and staff; ADF&G will absorb staff funding. The question of fertilizer application and potential permits were discussed; previously ADF&G Limnology approved lake fertilization. There is no updated fertilization guideline beyond the ADF&G Lake Fertilization Guideline (1979), and no existing approval process for aquatic fertilization. Edmundson and Carlson will develop Region 2 policy guidelines, Hilsinger will contact McGee regarding a requirement of ADF&G Limnology approval prior to aquatic fertilization; this would likely involve payment to Limnology for analysis as part of the permit process. Edmundson mentioned a dry fertilizer that is currently being applied in streams and shows promise for lakes.

Delight Lake Escapement

The proposed escapement weir was approved. This would transfer weir efforts from Chenik to Delight to cover smolt from mid-May and adults from mid-June; funding is from an EVOS close-out budget combined with transferred Chenik funding; the Chenik weir will not be installed in 1998. Because FY99 funding of the adult weir will only last into mid-July, Otis will install a video system from mid-July into mid- or late-August to enumerate the remainder of the sockeye and perhaps the coho run. The video will be monitored through weekly aerial survey flights. Port Graham should be kept informed of the video assessment and may be interested in providing supplemental funding.

Delight and Desire have previously been examined as fertilization prospects. These lakes are relatively easy to assess for fertilization. However, Limnology staff also suggested any potential fertilization should be complemented with limnology sampling and weir installation for counting emigration and immigration.

Port Dick Restoration Evaluation

The Port Dick fry enumeration project will be conducted this year with staff transferred to Delight Lake when the Port Dick emigration declines.

Sustainable Salmon Fisheries Project

Bucher related the Homer Fish and Game Advisory Committee has expressed interest in tracking the sustainable fisheries project. Brannian reported on a subcommittee retreat that modified Mundy's recommendations into 5 principles; a subcommittee report and further recommendations are expected in a few weeks. A summary from the Sustainable Fisheries committee may be available in late March. Although the Board would like formal criteria to evaluate sustainability in a given fishery, such criteria might not evolve into concrete regulations. The current process is to develop general criteria and future efforts may look at individual stock criteria. Hepler will contact Bosworth regarding obtaining greater detail and a roadmap for the sustainable salmon fisheries project; Hepler and Brannian will prepare a project summary, with the mission statement, for public dissemination, and Brannian will provide staff the Sustainable Salmon Fisheries Policy from Washington State. Krasnowski continues to incorporate comments and update his document.

Brannian later distributed the 12/30/97 and 1/98 summaries from the Sustainable Fisheries Project. Mundy's report was viewed as Task One and the retreat was seen as Task Three. Next is the "gap analysis" to compare the principles and criteria framework to existing regulations. Although the project goals are admirable, there is no dedicated funding for this project.

Research

EVOS Proposals

New EVOS funding is being directed away from sockeye studies and toward solving forage fish, groundfish, and chronic management issues. Otis developed a proposal to improve salmon escapement monitoring through remote video equipment. As a prototype, video equipment will be installed in conjunction with a weir at Delight Lake. One-page proposals are due February 20 with a committee of regional supervisors and Jim Seeb to develop a coordinated package of ADF&G proposals for EVOS-funding submission. Otis has EVOS proposals available for Kamishak/Shelikof herring and Delight Lake video. The proposed budgets are very draft; Bue and Bechtol will work with Otis on budgeting.

Catch Sampling

Last year's sampling efforts worked well, particularly given the success with a student intern. However, some stream surveys were missed last year due to weather and staffing constraints. Previous discussions indicated an increase in escapement sampling may be somewhat difficult to implement due to differential costs of port sampling versus escapement sampling. Staff discussed the option of having a multi-species sampling technician, such as last year's student intern, that could help sample in a variety of survey and commercial catches. Bechtol and Bucher will develop the FY2000 requests with an additional sampler in mind; Hilsinger encouraged a greater emphasis on escapement sampling, perhaps through greater numbers of weirs, etc. Otis will work to enhance Dickson's scale reading skills to include adult salmon, thereby easing some responsibilities currently assumed by Otis.

Salmon Reporting Status

Bucher relayed the finfish AMR will be released by April. Otis has now aged the backlog of salmon scales and the 1995 salmon report is ready for release. The 1996 & 1997 salmon AWL data will be released as a single report and should be completed before the field season. The 1998 herring forecast report is also near completion. A herring manuscript by Otis, Bechtol, and Bucher from the Lowell Wakefield Symposium is currently out for external review. Otis and Bue will coordinate a paper for the escapement enumeration video project.

HERRING

Kamishak Forecast and Assessment

The Kamishak herring forecast was issued October 2 with allocation of 200 short tons to Shelikof and 1,780 tons to Kamishak sac roe fishery based on a 10% exploitation; this is smaller than the 1997 forecast. The herring pre-season news release has not been distributed. The bulk of the 1998 harvest, measured as either biomass or abundance, is projected to be comprised of age-5 herring. Otis would like to explore size-at-age both within and between seasons. Late season sizes-at-age seem to be smaller than early season and size-at-age has increased over the last three years. Staff would also like to examine the Shelikof food-and-bait age composition for utility in the Kamishak forecast. Weighting of the different age composition samples was discussed. Otis described a potential Compact Airborne Spectrographic Imaging (CASI) proposal that was abandoned due to low egg observability in Kamishak and incomplete technological developments.

EVOS Proposal

Otis discussed Fatty Acid Signature Analysis (FASA); scientists around the Atlantic have used heart tissue and eggs to discriminate between stocks for Atlantic herring, striped bass, and lobsters. Otis and Bue developed an EVOS proposal to examine FASA as a tool to discriminate between Kamishak and Kodiak herring stocks (the "centerpiece" of the Division's submission packet). Through an EVOS-funded project, Otis also hopes to develop a GIS database. Otis will revisit the proposal budgets prior to final submission. Other potential aspects of the EVOS proposal for herring include scale pattern analysis and acoustic assessment.

Test Fish Program

Brady described Hilsinger's report (the "Red Book") on the Region 2 test fishery projects and budgets. The projected LCI herring revenue is still undetermined. Herring aerial surveys (~20 flights/season) are budgeted at \$31 k with funding from test fish revenues. Although greater effort is needed to have test fish projects pay for themselves, programs may still run a deficit in some years, such as 1996 when Kamishak herring test fish efforts yielded no revenue. Hilsinger suggested developing two contracts, the first an early season cost recovery to generate revenue for aerial survey costs; and the second to cover late season age composition sampling. Staff also suggested soliciting bids in tons or pounds instead of a price/ton. Brannian suggested offering the Kamishak, Togiak, and PWS herring test fish contracts as a package. Bucher will solicit for two test fish bids: a 50 ton harvest during the fishery and potentially treated as a pooled contract with Togiak and PWS; and a 50 ton harvest during the charter contract. Last year, no bids were received pre-season so the contract was modified to allow some harvest taken during the late-season sampling. Assuming a contract is issued prior to the season, the fish could be taken at the vessel or processor's option instead of post-fishery as currently occurs in Kamishak. Hilsinger, as in past meetings, suggested requiring a performance bond because of problems with contractees backing out of test fishing contracts after the remainder of the fleet has left the grounds. Bucher suggested allowing greater test fish harvests in programs that have greater potential to catch excess, such as Togiak herring, and using the excess to fund less productive programs, such as Kamishak herring. Staff discussed pros and cons of shifting some projects from test fish to general funds. A grassroots campaign is developing to have some of the fish tax that is currently returned to the boroughs be redirected to ADF&G budget. Brannian will come to Kamishak for the fishery; the *Pandalus* will likely depart Homer on April 18.

SPORT FISHERIES DIVISION ISSUES

Board Proposals

Resurrection Bay PU Herring

Barry Stratton reported that the legal gear for personal use (pu) herring is currently limited to "an attended gillnet," but public proposals to allow dipnetting for herring are anticipated. For Resurrection Bay and the remainder of LCI, the proposed change is not viewed as a resource concern and would legalize a gear that is currently legal in other pu herring fisheries in the state. Staff discussed proposals to close the Seward harbor to dipnetting. The issue of changing set gillnets to drift gillnets as legal gear for pu herring was discussed, but staff acknowledged an existing use of set gillnets in Kachemak Bay.

Subsistence Herring

Staff discussed making legal gears the same for pu and subsistence herring in Cook Inlet. In the subsistence areas, subsistence fishing allows more gear and there is no closed season.

Kachemak Bay Fall Coho PU Fishery

Due to the discontinuation of coho stocking in Caribou Lake, the Sport Fish Division would like a closure "date" established for the fall coho pu fishery to reduce impacts on wild stocks. Although this fishery is popular with the public, Bucher questioned ADF&G's endorsement of a pu fishery targeting enhanced fish. The bulk of the 1997 pu harvest occurred away from the upper bay and was likely predominated by enhanced fish. Hepler reiterated support for a proposal to reduce the pu harvest guideline and change the season dates. Szarzi will submit a proposal to close Fox Creek and Hammarstrom will submit proposal for a fixed-length season on the pu fishery; an alternative might include closing the head of the bay to pu fishing.

Program Summaries

Szarzi distributed harvest tables for the Homer Spit, Halibut Cove Lagoon, and Seldovia. The projected 1998 smolt stocking levels include: Homer Spit - 240 k coho smolt (Bear Lake stock); 210 k early-run kings, and 105 k late-run king; Halibut Cove Lagoon - 105 k late-run king; and Seldovia - 105 k late-run king. Based on the Cook Inlet Coho Initiative (Marshall Plan), Sport Fish will coded-wire tag and mark 40% of the cohos released in LCI enhancement projects. Upper Inlet Sport Fish projects will screen for CWT tags, but sampling effort will not extend to LCI.

OTHER TOPICS

Board of Fisheries

Statewide Meeting

Summaries of Board decisions during the recent statewide meeting were distributed by email. Bechtol will distribute results to Bucher and other Homer staff.

1998 Proposals

Board proposals for the 1998-1999 cycle year are due in April. Kodiak would like to start the food-and-bait herring fishery based on a final forecast instead of a preliminary. Currently, the fishery opens by EO sometime after August 1. Brannian will contact Wayne Donaldson to discuss this issue and encourage Kodiak staff to submit a proposal to change the Kodiak fishery to a calendar start on October 1; no LCI regulation change is needed.

The Board returns to Lower Cook Inlet issues in November 1998. Hammarstrom will submit a proposal to remove the Seldovia open waters from the Customary and Traditional Findings. Baker also suggested that proposals be submitted to modify any regulations that read Loran Coordinates so they read in latitude/longitude.

Lower Cook Inlet Mariculture

Don McKay presented information on Kenai Peninsula aquatic farm permits; no new permit approvals are anticipated for 1998 due to legislative-induced delays in the Department of Natural Resources (DNR) permitting process. Gary Seims filed a claim against the State for the loss of a lantern net allegedly lost during an inspection of Kachemak Bay sites. The 1997 inspection resulted in four citations for unauthorized species violations, etc. Staff typically notify farmers the week before a visit and hope to make more visitations this summer. In 1997, Kachemak Bay Watch won a court claim that environmental regulations were not being met by the existing applications process. New legislation modified the application process, but could allow new approved permits up to a 10-year lease for a mariculture site; the current process allows a 2- or 3-year lease. Staff felt a 10-year allocation was excessive. McKay relayed that only about 30% of the Kenai Peninsula permitted farms sold product last year; and that the bulk of the state's mariculture production occurs from 3 sites in Southeast Alaska. DNR regulations are being modified regarding what constitutes a "commercial farm" from the current 50,000 lb to something less, possibly \$5,000 in sales. Staff expressed concerns over the potential for commercial clam mariculture preempting existing commercial clamming efforts and would like to see greater input from area and region staff (e.g., Simpson) in the mariculture lease/permitting process.

Simpson will soon be supervised by the Region II supervisor instead of by the statewide rehabilitation supervisor. Simpson will invite Duffy, McGee, et al. to attend a day of the Shellfish/Groundfish meeting March 31 - April 2 in Homer to discuss shellfish mariculture and live transport and holding of marine species.

McNeil River Review

Mikfik Creek Video

Otis distributed the draft operational plan for the Mikfik Creek video enumeration project. Most of the necessary equipment has been purchased although a street pole is still being obtained from DOT. Installation will involve burying a 4-foot culvert filled with concrete for a pole mounting foundation, with the pole removed at the end of the season but the concrete foundation left in place. The video will be powered by an AirMarine wind generator (cost \$750). The need of lighting for night viewing has not been determined. McNeil staff logistic support won't be requested beyond changing the video tape in the event that weather prevents the Homer staff from flying over. The proposed study site is below the lagoon near the lake outlet. Although Otis thought the video site would be accessed by walking down the streambed after flying to the lake, Aumiller felt the site may have two problems: (1) brush limiting access; and (2) a steep stream banks. Aumiller offered the availability of a small John boat for placement at the lake to facilitate video maintenance; the boat needs to be helicoptered from the lagoon to the lake. Otis was concerned about lightning and discussed the possibility of placing a lightning pole in the vicinity; Aumiller felt lightning will not be a problem. Bucher suggested backfilling the foundation hole with gravel to prevent the support pad from heaving. Initial deployment is scheduled for late May; McNeil staff hope to be available to help. Bucher will maintain the current aerial survey program to correlate with video estimates. Aumiller also mentioned the beach seine is still in the lagoon and needs to be returned to Homer. Muhlberg asked about the substrate intended for the stream-bed; Otis will research a panel or colored gravel to provide appropriate contrast for camera. Westlund will make a bear-training video available to Homer staff, perhaps through Phil Cowan. Post-season, Otis will provide Westlund video footage of bear activities. The *Pandalus* will be in Kamishak in April for herring and in late-May for scallops; McNeil staff requested having outboard fuel dropped off. Westlund will contact Homer staff regarding transporting equipment and fuels on the *Pandalus* in April and/or late May. McNeil staff will be on site in early June. Otis will provide Westlund the anticipated schedule for site visitation in 1998. Otis reported that the genetic studies for McNeil chums showed little potential for differentiating between McNeil and other stocks. Fatty acid signature analysis was discussed as an option for McNeil chums.

McNeil River Fish/Bear Studies

Hessing updated staff on her Master's project. Despite data limitations, preliminary results indicate use of McNeil River falls by female bears appears to be declining slightly, although total bear use has increased, suggesting that male use and proportional abundance has increased. Preliminary summary of

fishing activities for 1996 and 1997 indicated: (1) bears caught approximately half of the aerial survey counts (index) of chums irrespective of run size; (2) the male bear catch rate was double that of females; (3) bear hours declined although bear-use days increased; and (4) hourly fish catch was greatest from 7 p.m. to 7 a.m. For the latter Hessing wants to further explore the 24-hour observation data to determine if the arrival of refuge visitors at 7a.m. causes bear feeding to decline. Last year 101 individual bears were identified; an ongoing dietary study in another area found captive bears eat approximately one ton of fish during the summer. Hessing's next step is to summarize observations on individuals bears. Hessing has finished data collection and hopes to complete her write-up this year. Staff discussed the uncertainty about fish spawning above the falls.

Miscellaneous

NERRS Update

Otis reported on recent meetings with Glen Seaman over the National Estuarine Research Reserve System (NERRS) proposed for Kachemak Bay. The Draft EIS was sent to NOAA in December, NOAA's comments have been addressed and the draft returned to NOAA for further public distribution and comment prior to formal designation of Kachemak Bay as a NERRS site. As part of the NERRS process, Seaman hired Bridget Callahan on a 2-year contract with an office in Homer to coordinate an ecological characterization of Kachemak Bay. ADF&G staff will provide information to Callahan. Bucher remarked that ADF&G has not allocated specific funding for staff involvement with this project and that existing funds are external source that could be expanded with internal matches; Seaman had been encouraged to contact region and HQ regarding the project and potential funding.

GIS/MapInfo

Baker reported most of the salmon statistical areas lines need alignment as polygons for MapInfo; more information will be available at the upcoming database workshop. The possible future transition to ArcView was discussed, MapInfo files readily convert to ArcView. Baker will pursue potential funding for upgrading the region's software from MapInfo to ArcView. Hammarstrom pointed out that Homer staff have little invested in learning MapInfo so a shift to ArcView would not result in much learning loss.

Network and Software Issues

Hammarstrom reported the network is currently running smoothly, although he is unhappy with an unreliable back-up system and anticipates needing a \$2,500 replacement. Homer staff recently repaired several printers. All but 2 seasonals are running Pentium systems and many people have upgraded to Office 97.

Aquatic Plants

Bucher received a letter requesting approval to harvest 500 lb of *Nereocystis* to test market as a jellied product. Regulations are limited, and this would be a new fishery. No new fisheries will be allowed prior to codification of the Developing Fisheries Policy, scheduled for Board review next fall. Hilsinger suggested issuing an Experimental Permit for a one-time, limited harvest. Brannian will obtain SE Aquatic Plant permit for Bucher, and Bucher and Bechtol will research resource biology on *Nereocystis*.

Table 1. Action items assigned at the Lower Cook Inlet finfish staff meeting, 18-20 February 1998

1. Baker will come to Homer in March to review and modify salmon and herring database programs for compatibility with MS Access, to address year 2000 issues, and to talk about GIS/MapInfo database work.
2. Brannian will distribute the FY99 yellowbook requests.
3. Brannian will try to examine and better understand the DOT charging process.
4. Marnee Beverage will research interest payment responsibility on credit card late payments.
5. Brannian will contact Rob Bosworth on prioritizing the subsistence regulation change for the Dept. of Law review.
6. Hammarstrom is going to issue a subsistence handout and will also contact a Seldovia village member, such as Lillian Elvsaas regarding obtaining accurate reporting of the subsistence catch and effort
7. Bucher and Hammarstrom will modify the forecast to clarify coho and chinook harvests are simply long-term averages, without apportionment between natural and enhanced production.
8. Simpson will arrange a spring tour of the completed Seward Sea Life Center.
9. Hilsinger will contact Gary Fandrei regarding the Spring Creek PAR.
10. Hepler will contact Bosworth regarding obtaining greater detail and a roadmap for the sustainable salmon fisheries project; Hepler and Brannian will prepare a project summary, with the mission statement, for public distribution. Brannian will also distribute copies of the Washington State Sustainable Salmon Fisheries Policy.
11. Szarzi will submit a board proposal to close Fox Creek and Hammarstrom will submit a proposal for a fixed length season on the pu fishery.
12. In fulfillment of the Sustainable Fisheries Project gap analysis, staff will prepare a list of projects that are needed:
13. Simpson will invite Duffy, McGee, et al. to attend one day of the Shellfish/Groundfish meeting March 31 - April 2 in Homer to discuss shellfish mariculture and live transport and holding of marine species.
14. Otis, Edmundson, and Dickson will submit a proposal for Delight and, perhaps, Desire limnology sample processing, and perhaps weir enumeration, to the National Park Service.
15. Edmundson and Carlson will develop Region II policy guidelines on aquatic fertilization; Hilsinger will contact McGee regarding a requirement of ADF&G Limnology approval prior to aquatic fertilization; this would likely involve payment to Limnology for analysis as part of the permit process.
16. Bechtol and Bucher will develop the FY2000 requests with an additional sampler in mind.
17. Otis will work with Dickson to enhance Dickson's adult salmon scale reading skills.
18. Bue and Otis will coordinate regarding sample design for escapement enumeration (video) project to set up for publishing paper.
19. Brannian will work with Bucher, Regnart, and Brady to offer the Kamishak, Bristol Bay, and PWS herring test fish contracts as a package, including contacting Jamie Ross for publication in the herring association newsletter and also Joel Gay for various industry publications.
20. Bucher will solicit for two cost-recovery contracts for herring assessments: a 50 ton harvest to cover aerial surveys and possibly pooled with Togiak and PWS contracts; and a 50 ton during May to cover late season sampling.
21. Brannian will obtain SE Aquatic Plant permit for Bucher
22. Have Cowan contact Westlund regarding the bear-training video for Homer staff viewing.
23. Otis will provide Westlund the anticipated schedule for McNeil site visitation in 1998.

Table 2. Individuals who participated in all or a portion of the Lower Cook Inlet finfish staff meeting, 18-20 February 1998.

Wes Bucher (meeting chair)	Ted Otis	Steve Fried
Brian Bue	Tim Baker	Linda Brannian
Kelly Hepler	Nicky Szarzi	Lee Hammarstrom
John Hilsinger	Ellen Simpson	Barry Stratton
Jim Edmundson (by telephone)	Stan Carlson (by telephone)	Don McKay
John Westlund	Larry Aumiller	Pauline Hessing
Gay Muhlberg		William Bechtol (recorder)

OEO/ADA Statement

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**-DRAFT AGENDA-
1998 LOWER COOK INLET FINFISH STAFF MEETING**

Anchorage
February 18-20

Chairman:

Recorder:

Wednesday - 9:30 a.m.

I. SALMON

A. Regional Administration

1. Review 1997 Staff Meeting action items (Brady)
2. Review Pre-audits (Brannian/Fried)
3. Miscellaneous Issues
 - a. Vehicles - DOT costs/billing
 - b. Credit cards

B. Management and Development

1. 1998 Brief Season Overview (Bucher)
 - a. Seldovia Subsistence
 - b. Harvest forecast by species
2. PNP Project/Facility Review (Simpson)
 - a. AMPs/PARs
 - b. Port Graham Hatchery
 - c. Tutka Bay Hatchery
 - d. Trail Lakes Hatchery
 - e. Eklutna Hatchery
 - f. Seward Sea Life Center update
3. Board of Fisheries Proposals

C. Research/Field Projects

1. Project Review
 - a. Delight Lake escapement enumeration
 - b. Leisure Lake fertilization
 - c. Port Dick Creek evaluation
 - d. Limnology sampling
 - e. Catch/escapement sampling program (Bechtol)
2. EVOS Proposals
3. Reports Status

II. SPORT FISH DIVISION CONCERNS

- A. Board proposals (Hepler/Szarzi)
 - 1. Resurrection Bay P.U. herring
 - 2. Subsistence herring (gillnets, dipnets, etc.)
 - 3. Kachemak Bay fall coho P.U. fishery
- B. Program summary/modifications (Szarzi)
 - 1. Homer Spit stocking project
 - 2. Halibut Cove Lagoon stocking project
 - 3. Seldovia Bay stocking project
 - 4. Cook Inlet Coho Initiative
 - 5. New projects
- C. Staffing (Szarzi)
- D. Office space requirements (Hepler/Szarzi)
- E. Split Billing Charges - Xerox, Telephone, Fax, WAN, radio link
- F. Homer office remodeling (Bucher)

Thursday - 8:00 a.m.

III. HERRING

- A. Kamishak forecast/stock assessment (Otis)
 - 1. 1998 Forecast
 - 2. ASA Model/sampling design
 - 3. Postseason age comp. sampling
 - 4. Shelikof St. food/bait sampling and allocation notice date
- B. Kamishak District test fishing (Brannian)
- C. Vessel Contracts (Brady)
- D. Personnel/logistics (Bucher)

IV. OTHER MISCELLANEOUS TOPICS

- A. Computer programming needs
 - 1. Salmon escapement database (Baker)
 - 2. Year 2000 issues
- B. Computer network/software upgrades (Hammarstrom)
- C. GIS/Mapinfo project update (Baker)
- D. NERRS Update (Otis)
- E. Kachemak Bay Mariculture - status update (McKay ?)
 - 1. 1998 aquatic farm applications
 - 2. Department/Divisional responsibilities (Hilsinger)
- F. Homer Safety Officer
- G. Aquatic Plants

Friday- 10:00 a.m.

V. McNeil River Review - Joint CFMD/Wildlife Conservation

- a. Mikfik Cr. video escapement enumeration (Otis)
- b. McNeil River fish/bear studies (Hessing/Otis)

Homer Safety Officer

As I have stated I am willing to retain my status as Homer Safety Officer. However I feel all departments should pitch in some funding for the position as this program will benefit everyone.

The safety program as I have it planned requires about 1 man month to implement over the course of a year. Approximately two weeks are needed preferably around May 1 for updating and reviewing the safety manuals. This two week period can also be used to review all personnel on safety matters related to their positions. The other two weeks are spread out over the rest of the year on daily, weekly and monthly inspections of the office safety equipment, shop equipment, the outside yard, etc..

My present position with Scott runs from May 15 to December 31. During that period Scott has indicated he will absorb the two weeks of safety checks. This is fine and I will agree to that. However my goal as a seasonal is to acquire more time, providing a service for that time. The two week period beginning May 1 is where I would be looking for funding. This would also be a good time for safety review as most seasonals will be on by that time. My schedule from May 15 to Sept. 15 is variable days off, however work is from 1330 hrs. to 2100 hrs. This schedule would enable me to utilize earlier hours for safety issues. Wes had suggested to me that should the need for a safety orientation occur at any time during the summer I could come in earlier in the day and be compensated for my time perhaps by the division requiring the orientation. This would be fine with me.

Here is an outline of the Safety Program.

Annually-May 1 to May 15: Review and update all Homer office safety manuals and safety orientation for all personnel. I have ten Safety manuals covering all aspects of office and field duties. Everyone does not need all ten. However if a particular manual pertains to your duties it should be mandatory. This means all personnel not just seasonals or field camps. I have made a list of everyone I am currently aware of working here and what training they need. While this may sound boring and time consuming I have most of the training classes down to about 1.5 hrs. per excluding the firearm training which may take up to 4 hrs. This is also a good time to go over all equipment in preparation for the new season. Some of this equipment needs to be upgraded by the division involved or by cost to everyone in general. I do not foresee any major expenditures for office equipment in the coming year.

- A. Homer Office Safety Manual (mandatory for all and could be split into two classes)
- B. Lab Safety Manual
- C. Firearm Training
- D. Respiratory Program
- E. Hazardous Chemical and Hygiene Program
- F. OSHA Paperwork and Documents
- G. Aircraft Safety

- H. Boating Safety
- I. Bear Safety
- J. Chainsaw Safety

Thinking ahead to next year I believe the Port Dick project will require field personnel to come on duty at the end of March or so. If I am around (may be cod fishing or wolf trapping !) I could come in and give the training classes and be compensated at a later date. However the actual shooting part of the firearm training could be done by someone on duty so they are covered in case of accident. (of course that is not supposed to happen!)

There may also be other projects I am unaware of for next year.

Also while I am off duty Marnee as office Manager will perform the monthly safety inspections.

You may notice first aid and CPR are missing. These have been given on a yearly basis by the local EMT and will hopefully continue.

Your comments, criticisms and help would be appreciated on the Safety Issues of our office. I will be around until the end of the month if something can be decided by then or I will be in touch with the office periodically while on leave. I am currently without E- mail so just stop by and have a talk. Thank You.

Phil

Monthly: Inspections of; Smoke Alarm
Fire Extinguishers
Lab Safety Equipment
Lab Spill Clean up Kits
First Aid Kits
Laboratory Fume Hood
Safety Light
Extension Cords, Power Tools ,etc.
Shop Safety Equipment
Outside Yard Safety Inspection
Hazardous Chemical Inspection and Disposal
Dodge Boom Truck Safety Check

Weekly: Inspections of; Lab Safety Shower
Lab and Shop Eyewash Stations
Shop Power Equipment (Guards,etc.)

As Safety Officer I would also make daily observations throughout the office and field

1998 LOWER COOK INLET PRELIMINARY SALMON HARVEST FORECAST

	<u>Enhanced</u>	<u>Natural^a</u>	<u>Total</u>
CHINOOK	^b	1,300	1,300
SOCKEYE	235,000 ^c	87,700	322,700
COHO	^b	14,800	14,800
PINK	2,464,000 ^c	323,300	2,787,300
CHUM	0	11,100	11,100
Total	2,699,000	438,200	3,137,200

^a Forecasts for natural runs of chinook, sockeye, coho, and chum salmon are simply average commercial harvests during the years 1980 - 1997.

^b Chinook and coho salmon returning from stocking projects in Lower Cook Inlet are intended for recreational fisheries but are expected to contribute incidentally to commercial catches.

^c Includes common property plus cost recovery harvests.

The preceding numbers include the following natural and enhanced components:

ENHANCED RUNS

SOCKEYE SALMON

Kirschner Lake	30,000
Leisure Lake	53,000
Hazel Lake	32,000
Bear Lake	11,000
Grouse Lake	53,000
English Bay Lakes	<u>56,000</u>

TOTAL 235,000

PINK SALMON

Tutka Hatchery Harvest	2,464,000
Port Graham Hatchery	0

2,464,000

NATURAL RUNS

SOCKEYE SALMON^a

Southern District ^b	41,600
Outer District	22,300
Eastern District	9,500
Kamishak Bay District	<u>14,300</u>

TOTAL 87,700

PINK SALMON

Southern District	6,800
Outer District	262,200
Eastern District	24,400
Kamishak Bay District	<u>29,900</u>

TOTAL 323,300

^a Numbers for natural sockeye harvests are not forecasts but simply represent 1980-97 average commercial catches.

^b Incidental harvest of fish not originating from the Southern District.

Sustainable Fisheries Project

Problem Statement

Management strategies that implement the state's constitutional mandate that "fish . . . shall be utilized, developed, and maintained on the sustained yield principle . . .," have been highly successful in Alaska. In order to maintain high standards of performance in salmon management the state needs principles, objective criteria, and a framework that provide a structured process for periodic assessment of the policies, management practices, and the health of salmon resources.

Alaska must develop a comprehensive policy that clearly states the principles for sustainable salmon management. The lack of such a policy, combined with inconsistent use of important fishery management terms and concepts, such as "escapement goals," "conservation concerns," and "stock," creates a problem for the Board of Fisheries, the Department of Fish and Game, and the public.

Mission Statement

To ensure sustainable salmon fisheries at high levels, for all beneficial uses.

Project Goals

- Develop and adopt a comprehensive sustainable fisheries policy that clearly states the essential principles for sustainable salmon management
- Develop and adopt a framework that provides objective criteria and a structured process for periodic assessment of the state's policies, management practices, and the health of salmon resources.
- Continue and solidify Alaska's role as a major salmon producer and contributor to the current global sustainable fisheries dialog.

Project Objectives

(Task One: the current state of salmon management) Prepare a report that sets forth the history of and current approach to salmon fisheries management in Alaska, including describing the constitutional, statutory, regulatory, and policy foundations that contribute to sustainable fisheries. Also discuss salmon stock status, stock enhancement, stock assessment policies, methods, and programs, and overview basic management strategies used today. As part of the document summary, prepare a comprehensive list of these elements in a tabular format.

(Task Two: the salmon management evaluation framework) From a comprehensive review of recent literature describe the essential principles for managing salmon fisheries in a sustainable fashion. Use these principles to develop a framework, including criteria and an implementation process, to use for evaluating Alaska's current salmon management regime.

(Task Three: Board, department, and public review of the essential principles, criteria, and terms) Review of the Task Two principles and criteria, by the Board of Fisheries, the department, and the public will help clarify use of the sustained yield principle referenced in the constitution, and will help define the framework and process to be used in subsequent analytical steps in this project. This Task will also result in agreement on definitions of key terms commonly used in the state's fishery management programs.

(Task Four: the salmon fisheries policy gap analysis) Apply the "Task Three" principles and criteria framework to the "Task One" description of the salmon fisheries regime, at the policy ("big picture") level of analysis. Identify the gaps in the state's current salmon fishery policies, statutes, and regulations.

(Task Five: draft a sustainable salmon fisheries policy) The ADF&G/BOF sustainable fisheries committee will draft a sustainable salmon fishery policy for Alaska that fills any gaps identified in Task Four. This policy will be consistent with the Task Three principles and criteria and may consist of an umbrella policy and other "implementing" policies. The results of this task will be subjected to department review and to the public and technical advisory panels for their review and comment, prior to its submission to the Board of Fisheries.

(Task Six: the management practices evaluation framework) Fine-tune the "Task Two" framework as needed to apply it to specific salmon fisheries management programs and practices including assessment of salmon stocks.

(Task Seven" the management practices gap analysis) Apply the "Task Six" framework to the specific fisheries statewide as these fisheries are considered in the ongoing Board of Fisheries process. Identify strengths, weaknesses in specific fisheries management plans and practices.

(Task Eight: the public information and education effort) develop a public information and education effort that will articulate fishery management concepts, principles and procedures used in Alaska, including the sustainability principles and criteria developed through this project. I&E components will include topics such as "the management cycle of a sustainable fishery." This material will be prepared for a variety of statewide, national, and international audiences, including schools.

DRAFT
1/98

Principle 1. Maintain resource productivity/ Protect wild salmon and its habitat.

We expect that each of these criteria would have many sub-criteria (i.e., specific water quality, in-stream flow, substrate quality criteria, etc.) developed in specific application of the framework.

1. Salmon spawning, rearing, and migratory habitats are protected.
 - A. Salmon stocks and habitat are not perturbed beyond natural boundaries of variation.
 - B. Scientific assessment of possible adverse ecological effects of proposed habitat alteration and their impacts on salmon populations are conducted prior to approval of said proposals.
 - C. Adverse environmental impacts on wild salmon and their habitats are assessed and when appropriate corrected.
 - D. All essential salmon habitat in marine, estuarine and freshwater ecosystems etc. are protected, as is the access to these habitats. These include:
 - i. Spawning beds.
 - ii. Freshwater rearing.
 - iii. Estuarine/near-shore rearing.
 - iv. Offshore rearing.
 - v. Riparian zone.
 - E. Salmon habitat is protected on a watershed basis.
2. Salmon are protected within the spawning, rearing, and migratory habitats.
3. Collateral mortality resulting from habitat loss is understood and considered by affected user groups when making conservation and allocation decisions.
4. Degraded salmon spawning, rearing, and migratory habitats are restored.
5. Depleted stocks are allowed to recover or where appropriate are actively restored.
6. Diversity is maintained at the genetic, species, population, and ecosystem levels.

Principle 2. Maintain escapements within ranges necessary to conserve and protect potential salmon production and maintain normal ecosystem functioning.

1. The temporal and geographic magnitudes of spawning escapements are measured; escapement-monitoring programs are appropriate to the scale and intensity of each stock's use.
2. Escapement goals ranges are established in a manner consistent with sustained yield and incorporate:
 - A. Uncertainty associated with measurement technique.
 - B. Observed variability in the population measured.
 - C. Varying abundance within related sub stocks of the population measured.
3. Escapement goals are achieved in a manner consistent with appropriate geographic and temporal distribution of spawners
4. Sources and impacts of fishing mortality are understood and considered in harvest management decisions.
5. Escapements are achieved in a manner consistent with protection of non-target stocks or species.
6. The genetic and phenotypic characteristics of escapement are understood and considered in harvest management decisions.

7. The role of salmon in normal ecosystem functioning (fish and wildlife and their habitat) is understood and considered in harvest management decisions.
8. The population trends of the salmon and allied species are monitored and appropriately considered in harvest management decisions.

Principle 3. Establish and apply an effective salmon management system, which regulates human activities that affect salmon.

1. The salmon management system is appropriate to scale and intensity of use. Management objectives are provided as a harvest management plan/strategy/guiding principles/policies (i.e. genetic, mixed stock management, fish disease), which are subject to periodic review.
2. Management acts in a timely and adaptive fashion to implement objectives on the basis of best available scientific information.
3. Management agency has clear authority (in statute and regulation) to control human-induced sources of salmon mortality, including mortality due to habitat loss (collateral mortality).
4. Incorporates Appropriate procedures for effective compliance, monitoring, control, surveillance and enforcement are incorporated.
5. Management considers the consequences of artificial propagation of salmon on natural stocks.
6. There exists an objective means of evaluating the effectiveness of fishery management actions.
7. Management has access to mechanism for collection and dissemination of the information and data necessary to carry out management activities.
8. Management has the means to separate biological and allocation issues.
9. Adequate staff and budget for research, management, and enforcement activities are available to fully implement sustainable fisheries principles.
10. Feedback loops are consistently applied, using post management action indicators (escapement, habitat maintenance within current regulations, etc.), to verify that the management actions sustained salmon populations, fisheries and habitat. Where deficiencies are documented, actions are taken to resolve the deficiencies.
11. Fisheries management implementation and outcomes are consistent with Board regulations. Board regulations are consistent with Alaska statutes. As an example, subsistence needs receive priority called for by statute.
12. For transboundary stocks appropriate procedures for effective compliance, monitoring, control, and surveillance are coordinated with those of other states or agencies.
13. Effective joint assessment and management arrangements are in place for stocks that cross jurisdictional boundaries.
14. Proposals for salmon fisheries development or expansion include assessments required for sustainable management.

Principle 4. Maintain public support and involvement for sustained use and protection of salmon resources.

1. Appropriate mechanisms exist for resolution of disputes.
2. Management provides for dissemination of results to all interested parties in a timely fashion.
3. Regulatory decisions addressing management and allocation decisions are made in an open and fair public involvement process.
4. An allocation of the conservation burden for salmon is achieved across all user groups.
5. Promotes understanding of the proportion of mortality inflicted on each stock by each user group.
6. Adequately funded public information and education program exist to include:
 - A. Salmon habitat requirements.
 - B. Salmon habitat threats.
 - C. Value of salmon and habitat to public and ecosystem.
 - D. Natural variability and population dynamics.
 - E. Value of salmon to other fish and wildlife.
 - F. Current status of Alaska fish stocks and fisheries.
 - G. Board of Fisheries process.

Principle 5. Knowledge is the essence of management/ In the face of uncertainty, the management of fish stocks or essential habitat must be conservative.

1. Continuous updating of best available scientific information on the status of populations and the condition of their habitats subject to peer review.
2. Evaluate and document the effectiveness of habitat protection, laws, and regulations to sustain productivity of salmon habitats.
3. Conservation and management decisions for fisheries take into account the best available information, including environmental, economic, social, and resource use factors.
4. Research and data collections are undertaken in order to improve scientific and technical knowledge of fisheries including their interactions with the ecosystem.
5. The trans-boundary nature of aquatic ecosystems is recognized by encouraging multilateral cooperation in research and management.
6. Precautionary approach is used for habitat alteration.
7. Precautionary approach is used for fisheries management.

MEMORANDUM

State of Alaska

TO: Wes Bucher
and Dennis Gretsich
Management Biologists
CFMD, Homer and Kodiak

DATE: October 2, 1997

FAX NO: 235-2448

TELEPHONE NO: 235-8191

FROM: Ted Otis
Research Biologist
CFMD, Homer

SUBJECT: 1998 Kamishak Bay
Herring Forecast

The 1998 Kamishak Bay herring forecast is 19.8 thousand short tons. The Kamishak Bay District Herring Management Plan (5 AAC 27.465) mandates an exploitation rate of 10 percent when the spawning biomass is projected to be between 8,000 and 20,000 short tons. Ten- percent exploitation results in a harvest guideline of 1,980 short tons for 1998.

Age	1998 Abundance Forecast (millions of fish)	1998 Age Composition (by abundance)	1998 Predicted mean wt. (g)	1998 Forecast Biomass (tons)	Harvest Rate	1998 Total Allowable Harvest	1998 Age Composition (by weight)
3	11.081	11.0%	83	1016.4	0.10	102	5.1%
4	20.138	19.5%	128	2847.6	0.10	285	14.4%
5	39.439	37.6%	161	7019.4	0.10	702	35.5%
6	12.035	11.4%	194	2577.1	0.10	258	13.0%
7	3.511	3.4%	221	856.0	0.10	86	4.3%
8	3.232	3.1%	244	870.7	0.10	87	4.4%
9	2.225	2.1%	260	637.5	0.10	64	3.2%
10	10.693	10.3%	287	3381.7	0.10	338	17.1%
11	1.274	1.2%	296	415.8	0.10	42	2.1%
12	0.282	0.3%	312	96.7	0.10	10	0.5%
13+	0.125	0.1%	328	45.3	0.10	5	0.2%
Totals	104.03	100.0%	172	19,764		1,976	100.0%

*Represents the mean weight weighted by the forecasted abundance at age.

Allocation of the 1998 Kamishak herring projected harvest would be:

	Exploitation Rate	Harvest (short tons)
Kamishak Bay Sac Roe Fishery	0.09	*1780
Shelikof Straits Bait Fishery	0.01	200
Total	0.10	1,980

* (rounded down from 1,782 and rounded
up from 198 respectively)

cc: Hammarstrom, Bechtol, Fried, Brannian, Hilsinger, and Donaldson

REGION II FY-98 TEST FISH SUMMARY

	FY-98 Projected Expenditures	Verified Revenues to Date	Projected Revenues Bal of FY	Balance	FY-97 Revenues
PWS Salmon					
7337 Eshamy District TF	29.9	0.0	30.0	0.1	0.0
Cook Inlet Salmon					
7357 UCI Fish Monitoring	0.0	0.0	0.0	0.0	0.0
7358 Offshore Test	56.3	1.3 +?		-55.0	23.5
7359 Set Net Buoy Stickers	10.0	2.1	8.0	0.1	11.8
Cook Inlet Salmon Total	66.3	3.4	8.0	-54.9	35.3
Bristol Bay Salmon Test Fish					
7417 Stock Identification TF	90.6	194.7		104.1	334.7
7418 Eastside Catch TF	26.3	0.0	0.0	-26.3	0.0
7419 Kvichak TF	43.7	11.9	0.0	-31.8	2.6
7420 Egegik TF	30.7	5.7	4.0	-21.0	11.9
7421 Ugashik TF	24.5	0.0	0.0	-24.5	8.4
7422 Eastside District TF	96.4	74.0	8.0	-14.4	31.9
7423 Igushik TF	18.5	2.2	1.5	-14.8	7.3
7424 Nushagak District TF	37.6	45.2	8.0	15.6	21.0
7425 Westside Catch Samp	23.1	0.0	0.0	-23.1	0.0
7426 BB Limno TF	17.3	0.0	0.0	-17.3	0.0
7427 Ugashik Smolt TF	5.5	0.0	0.0	-5.5	0.0
Bristol Bay Salmon Totals	414.2	333.7	21.5	-59.0	417.8
PWS Herring					
7437 PWS Herring TF	0.0	0.0	4.0	4.0	0.0
LCI Herring					
7447 LCI Herring TF	32.1	0.0		-32.1	7.1
BB Herring					
7453 Tog Spawn on Kelp	0.0	0.0	0.0	0.0	
7454 Late Season Sampling	43.0	0.0	0.0	-43.0	
7459 Togiak Herring TF	25.4	0.0	50.0	24.6	
Togiak Herring Total	68.4	0.0	50.0	-18.4	100.9
Region II Groundfish					
7466 Central Groundfish	61.6	22.7		-38.9	67.6
Region II Shellfish					
7472 PWS Shellfish TF	0.0	0.0	0.0	0.0	0.0
7482 CI Pot Buoy Stickers	0.0	0.0	0.0	0.0	0.0
7483 CI Shellfish TF	5.0	0.0	0.0	-5.0	0.0
Shellfish Total	5.0	0.0	0.0	-5.0	0.0
REGION II TOTALS	677.5	359.8	113.5	-204.2	628.7

1997 HATCHERY PERFORMANCE - EGGTAKES AND RELEASES

				EGGTAKES		RELEASES				
Species		Permitted Number	Eggtake Location	AMP Planned Eggtake	Actual 1997 Eggtake	Diff.	Release Location	1997 AMP Planned-Release	1997 Actual Release	Diff.
Eklutna Hatchery	Coho	160 K GE (FTP for 100 K GE)	Eklutna	0	0		Eklutna	65,000 BY 95	69,176 BY 94	106%
	Sockeye	18 M GE (3 M fry Big Lk, 2 M fry Blodgett Lk, Max 1 M smolt onsite rls rest for LCI Lakes)	Big Lk. (Meadow Cr.)	8,000,000	8,000,000	100%	Meadow Cr. Blodgett Lake Eklutna Grouse Lk.	3,000,000 BY 96 1,200,000 BY 96 1,000,000 BY 95 500,000 BY 95	2,900,000 BY 96 1,118,000 BY 96 1,000,000 BY 95 500,000 BY 95	97% 93% 100% 100%
			Tustumena	4,200,000	4,041,000	96%	Leisure Lk. Hazel Lk. Kirschner Lk.	2,000,000 BY 96 1,250,000 BY 96 250,000 BY 96	2,000,000 BY 96 1,000,000 BY 96 250,000 BY 96	100% 80% 100%
		Coho	6 M GE	Bear Cr.	1,800,000	1,333,000	74%	Bear Cr. Bear Cr.	450,000 BY 96 150,000 BY95	448,700 BY 96 153,000 BY95
Trail Lakes Hatchery	Sockeye	30 M GE	Hidden Lk.	2,200,000	2,166,000	98%	Hidden Lk.	1,700,000 BY 96	1,501,000 BY 96	88%
			Packers Lk.	3,000,000	2,008,000	67%	Packers Lk. Grouse Lk.	750,000 BY 96 980,000 BY95	627,470 BY 96 1,167,000 BY95	84% 119%
			Bear Lk.	4,100,000	502,000	12%	Bear Lk.	950,000 BY 96	788,000 BY 96	83%
	Tustumena Lk.		8,900,000	6,849,000	77%	Tustumena Lk. Grouse Lk.	6,000,000 BY96 761,000 BY95	6,013,000 BY96 761,000 BY95	100% 100%	
			TOTAL SOCKEYE -	18,200,000	11,525,000	63%		11,141,000	10,857,470	97%
Tutka Hatchery	Chinook	4 M GE								
	Pink	125 M GE	Tutka	125,000,000	117,400,000	94%	Tutka	88,000,000 BY 96	89,000,000 BY 96	101%
	Sockeye	660 K GE	Packers Lk.	660,000	667,000	101%	Tutka	270,000 BY 95	245,000 BY 95	91%
Port Graham Hatchery	Pink	110 M GE	PGH	35,000,000	15,489,306	44%	PGH	1,500,000 BY 96	909,986 BY 96	61%
	Sockeye	1.35 M GE	English Bay Lks.	1,350,000	1,330,927	99%	English Bay Lks.	?????	199,000 BY 96	#VALUE!
	Coho	40 K GE	Port Graham R	40,000	38,300	100%	Port Graham R	40,000 BY96	30,000 BY96	75%

Diff. = the difference between the 1997 AMP and the 1997 annual report

Table 1. Personal use/subsistence fishery catches for the Southern District of Cook Inlet, 1969-1997.

Year	Permits Issued	Permits Returned		Permits Did Not		Total Catch						Total
		Number	%	Fish	Fished	Chinook	Sockeye	Coho	Pink	Chum	Other	
1969	47	44	93.6	35	9	0	9	752	38	0	17	816
1970	78	73	93.6	55	18	0	12	1,179	143	13	39	1,386
1971	112	95	84.8	53	42	2	16	1,549	44	7	20	1,638
1972	135	105	77.8	64	41	1	11	975	48	69	19	1,123
1973	143	128	89.5	82	46	0	18	1,304	84	40	9	1,455
1974	148	118	79.7	52	66	0	16	376	43	77	27	539
1975	292	276	94.5	221	55	4	47	1,960	632	61	95	2,799
1976	242	221	91.3	138	83	16	46	1,962	1,513	56	75	3,668
1977	197	179	90.9	137	42	12	46	2,216	639	119	84	3,116
1978	311	264	84.9	151	113	4	35	2,482	595	34	89	3,239
1979	437	401	91.8	238	163	6	37	2,118	2,251	41	130	4,583
1980	533	494	92.7	299	195	43	32	3,491	1,021	25	153	4,765
1981	384	374	97.4	274	100	25	64	4,314	732	89	100	5,324
1982	395	378	95.7	307	71	39	46	7,303	955	123	8	8,474
1983	360	328	91.1	210	118	4	21	2,525	330	40	2	2,922
1984	390	346	88.7	219	127	4	25	3,666	821	87	25	4,628
1985	316	302	95.6	205	97	5	43	3,372	166	35	3	3,624
1986	338	310	91.7	247	63	7	68	3,831	3,132	56	0	7,094
1987	361	338	93.6	249	89	5	50	3,977	279	61	0	4,372
1988	438	404	92.2	287	117	14	60	4,877	1,422	75	0	6,448
1989	466	452	97.0	332	120	41	156	7,215	882	53	49	8,396
1990	578	543	93.9	420	123	12	200	8,323	1,846	69	0	10,450
1991	472	459	97.2	295	164	8	47	4,931	366	23	0	5,375
1992	365	350	95.9	239	111	5	63	2,277	643	21	0	3,009
1993	326	317	97.2	215	102	6	44	1,992	463	18	0	2,523
1994	286	284	99.3	224	60	66	80	4,097	1,178	18	0	5,439
1995	235	232	98.7	178	54	118	108	2,916	343	7	0	3,492
1996	299	293	98.0	213	80	302	102	3,347	1,022	24	0	4,797
1997	276	264	95.7	186	78	384	191	1,817	257	12	0	2,661
69-96												
Avg.	310	290	93.4	201	88	27	54	3,190	773	48	34	4,125
77-96												
Avg.	374	352	94.1	247	105	36	66	3,964	954	51	32	5,104
77-86												
Avg.	366	338	92.2	229	109	15	42	3,532	1,064	65	59	4,777
87-96												
Avg.	383	367	96.0	265	102	58	91	4,395	844	37	5	5,430
91-96												
Avg.	331	323	97.6	227	95	84	74	3,260	669	19	0	4,106

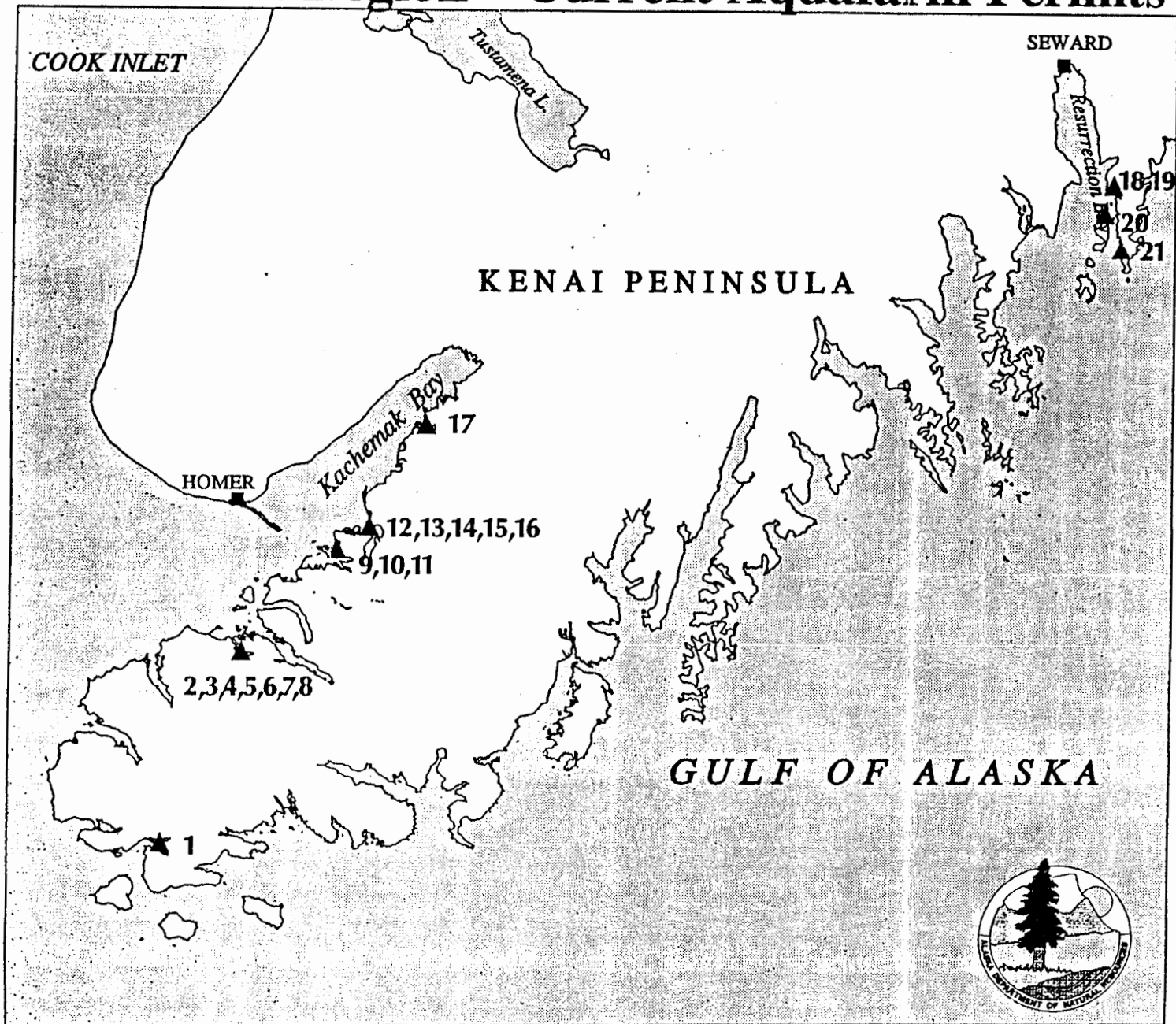
*NOTE: 1992-97 figures are based on both returned permits and oral reports.

Avg. cohos 1969 - 1978 =	1,476	Avg. total salmon 1969 - 1978 =	1,978
Avg. cohos 1969 - 1981 =	1,898	Avg. total salmon 1969 - 1981 =	2,650
Avg. cohos 1969 - 1985 =	2,444	Avg. total salmon 1969 - 1985 =	3,182
Avg. cohos 1969 - 1988 =	2,711	Avg. total salmon 1969 - 1988 =	3,601

List does not include two farms (mussel reefs) in Halibut Cove Lagoon
 2 Denis Douglas has three sites in Talkeetna Bay by ADFA permitting system - BNR lumped as one

MAP #	FILE NO	BUSINESS NAME	LAST NAME	F NAME	ADDRESS	CITY	STATE	ZIP CODE	PHONE	LATITUDE	LONGITUDE	PERMEXPIRE
1 *	226108	MAS OYSTERS	POINTESTER	AL	PO BOX 32	ANCHOR POINT	AK	99556	907-235-1034	591245	1514300	2/28/97
2	225298	EAGLE ROCK SEAFARMS	BANTA	JOSEPH	12304 HILLTOP DR	ANCHORAGE	AK	99515	907-522-3808	592700	1513100	2/28/98
3	225879	RED MOUNTAIN SHELLFISH CO	BESS	MICHAEL	PO BOX 197	ANCHOR POINT	AK	995560197	907-235-7133	592200	1513300	2/28/98
4	225878	NATURAL MYSTIC SEA FARMS	SCHIEER	DAVID	PO BOX 284	CLAM GULCH	AK	99968	907-262-1750	592750	1513200	2/28/99
5	226858	MUSSELMAN SEAFOODS	DOUGLAS - 3 S. Jr	DENIS	PO BOX 344	SOLDOTNA	AK	99669	907-262-6819	592756	1513118	2/28/00
6	225292	NORTHERN LIGHTS OYSTER CO	BESS	TONY	PO BOX 1140	HOM	AK	99603	907-235-7133	592700	1513200	2/28/98
7	225936	OYSTER CATCHER SEA FARMS	DONART	GEORGE	123 E 11TH AVE	ANCHORAGE	AK	99501	907-279-9217	592700	1513100	2/28/98
8	225560	OYSTER COVE SEAFARMS	FELL	DON	PO BOX 615	HOMER	AK	99603	907-235-7771	592800	1513100	2/28/99
9	225547	PETERSON BAY OYSTER CO	PETERSON BAY OYSTER CO INC		PO BOX 2284	HOMER	AK	99603	907-235-4269	593455	1511562	2/28/99
10	225561	SEIMS SEA FARMS	SEIMS	ROBERT	PO BOX 486	HOMER	AK	99603	907-235-7156	593425	1511615	2/29/96
11	225563	MOSS ISLAND OYSTER FARM	BADER	RONALD	738 OCEANVIEW DR	ANCHORAGE	AK	99515	907-345-1864	593400	1511530	2/28/99
12	225884	HALIBUT COVE SEAFOODS	MILLER	BRIAN	PO BOX 6406	HALIBUT COVE	AK	99603	907-296-2246	593575	1511230	2/28/97
13	225552	SEA FARMS OF ALASKA	SIDELINGER	KEVIN P	PO BOX 659	HOMER	AK	99603	907-235-6494	593506	1511104	2/28/99
14	225564	SELECT SEAFOODS OF ALASKA	BRADLEY	MARK	HCO1 BOX 1595-8	KENAI	AK	99611	907-776-5498	583630	1511230	2/28/99
15	225871	ISMALLOF SEAFARMS	HALPIN	ROBERT	PO BOX 1051	HOMER	AK	99603	907-235-8937	593575	1511230	2/28/97
16	226864	KSMA	KSMA		PO BOX 2274	HOMER	AK	99603	907-776-5498	593544	1511312	2/28/00
17	226873	BEAR COVE OYSTER COMPANY	MENKE	JOHN B	57900 CLOVER AVE	HOMER	AK	99603	907-235-7905	594349	1510355	2/28/00
18	226300	HATCH BROTHERS	HATCH	ARNE	PO BOX 346	SEWARD	AK	99664	907-224-3492	595813	1491700	2/28/98
19 *	226327	DREAMER FISHERIES UNLIMITED	ASTOR	CRAIG G	PO BOX 1942	SEWARD	AK	99664	907-224-8797	595600	1491700	2/28/98
20	226566	ALASKA OYSTER COMPANY	STEINBERGER	MATTHEW	PO BOX 2403	SOLDOTNA	AK	996692403	907-262-2316	595700	1491800	2/28/99
21	226563	OYSTER COVE COMPANY	LINVILLE	ROBERT	PO BOX 1753	SEWARD	AK	99664	907-224-3252	595500	1491700	2/28/99

Cook Inlet Region ~ Current Aquafarm Permits



Produced by ADNR, Division of Land, Technical & Data Management Section

February, 1997

Update on McNeil River Bear-Fish Research 2/20/98

Chapter approach to research

Chapter 1: Bear use of McNeil River Falls from 1976 to 1997: Has it changed?

Methods

Analysis

Data limitations a) data are "subjectively objective"
 b) Earl Becker's monitoring addresses these shortcomings

Results: a) slight decreasing trend in females **but**
 b) analysis preliminary

Poster presentation

Chapter 2: Chum salmon mortality by bears at McNeil River Falls

Methods a) fish catch by class of bear
 b) daily samples from 12:00 h to 18:00 h
 c) systematic sample from 07:00 h to 22:00 h@3 day int.
 d) 3 overnights each in 1996, 1997

Analysis a) preliminary-summary statistics
 b) serial correlation / time series

Data limitations a) viewer tolerance
 b) Falls area only
 c) only three overnights each summer

Summary stats

Other data

Timeline for project

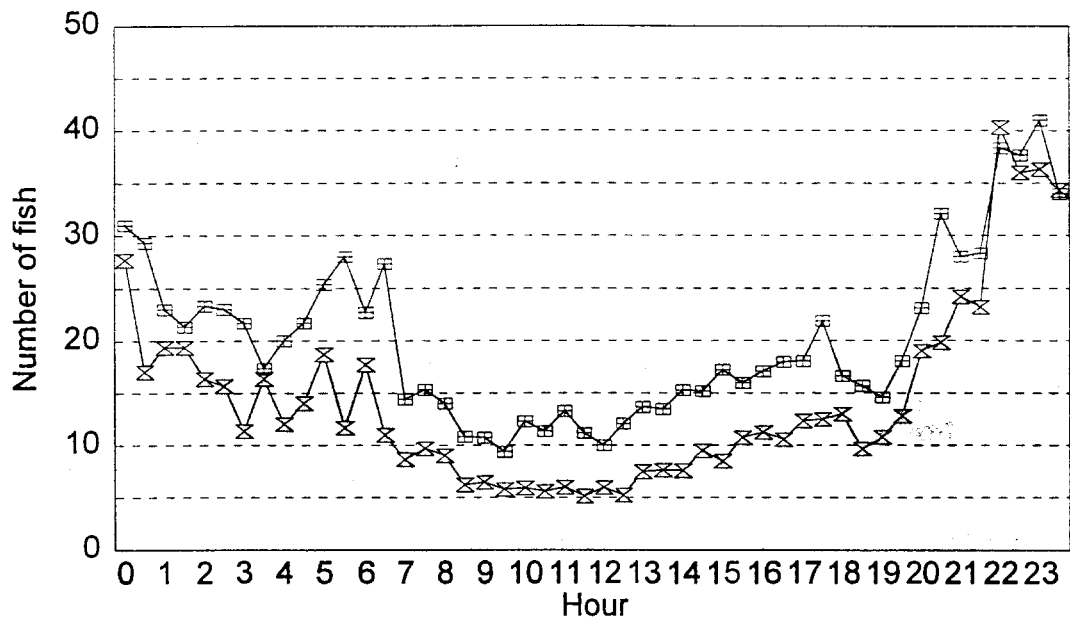
Chapter 3: Myth or reality?

Preliminary summary of fishing activity at McNeil River Falls, Alaska by brown bears in 1996 and 1997.

	1996	1997
<u>Observation period</u>	7/5/96 to 8/6/96	7/3/97 to 8/8/97
Number of ½ hour observations	699	809
Rainfall during study period	12.32 cm	4.19 cm
Aerial live counts index for chum salmon * (annual)	16,100	27,495
Total fish observed caught	7,632	13,581
<u>Fishing rates (fish/bear hours)</u>		
Adult male rate	0.0627	0.1324
Adult female rate	0.0309	0.0508
Adult female with cubs rate	0.0296	0.0719
Subadult rate	0.0161	0.0147
Total bear hours observed	159,273	144,583
Fish caught per bear hour	0.0545	0.1089
Bear use days • 1530	1530	1964
Average days recognizable bears at Falls •	15.5	15.1

• Unpublished data from Alaska Department of Fish and Game

Fish Catch by Hour McNeil River, Alaska



-x- 1996 -□- 1997

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